REMARKS

Claims 1-3, 5-15, 17-19, 21-40, and 41-52 are presented for prosecution. Claims 1, 5, 6, 8, 11, 13, 17, 22, 26, 28, 30, 41, 42, and 43 are amended. Claims 4, 16, and 20 were previously cancelled in a prior Office Action Response.

Claims 1, 5, 11, 13, 17, 22, 28, 30, and 41 are amended to explicitly recite that the interface device is external to the printing apparatus.

Claims 6, and 8 are amended to more clearly recite a trigger mechanism so as to emphasize the cause-and-effect of the claimed mechanism.

Claims 26, 41, 42, and 43 are amended to maintain a proper antecedent basis between recited claim elements, and to address typographic errors.

Claims 10, 27, and 36 are objected to for being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Applicants thank the Examiner, and reserve the right to amend these claims accordingly in the future. Applicants believe that it may not be necessary to amend these claims at present.

Claims 1-7, 9, 11-24 and 26, 28-34, 37-52 are current rejected under 35 U.S.C. §103(a) as being unpatentable over Indei (U.S. Pat. 5,131,077) in view of Applicant's presented prior art. Claims 8, 25, and 35 are currently rejected under 35 U.S.C. § 103(a) as being unpatentable over Indei (U.S. Pat. 5,131,077) in view of Applicants submitted prior art and further in view of Takaoka (U.S. Pat. 5,103,318).

Applicants contacted Examiner Qin on June 8, 2006 to clarify some apparent misunderstanding regarding the present invention and Indei. The Office Action appears to mix elements of the recited "printing apparatus" with elements in Indei's "interface device", which the present claims restrict to being separate from the "printing apparatus". For example, in reference to claim 1, the Office action states that Indei shows in his Fig. 1 several of the elements resided in claim 1. Applicants respectfully point out that Indei's Fig. 1 correspond to "printer control device" 5a, which the Office Action equates with the presently claimed "interface device" since it (as is required in the claims) interfaces a printing apparatus 5b with a host device. However, the elements recited in

claim 1 correspond to the printing apparatus, and do not correspond to the interface device.

Furthermore, claim 1 requires that the "interface device", like the "host device", be separate from the printing apparatus. That is, the interface device is restricted to not being a part of the printing apparatus. Examiner Qin agreed that claim 47 did explicitly recite that the interface device is external to the printer, and suggested that the remaining claims be amended to similarly explicitly recite the interface device as being external to the printing apparatus. Although Applicants believe that this limitation is already inherent in the existing claim, Applicants are amending the claims accordingly.

The above rejection relates to rejection of claims 41-52, in which the Office Action asserts that the incorporation of Indei's printer controller 5a into his printer 5b to constitute one printing apparatus 5 would read on the present claims. As is explained above, this is not proper since the present claims require the interface device be maintained separate from the printer, and thus components in the interface device cannot be intermingled with components in the printer. Indeed, the present claim language requires that the printer (under its own direction) transfer setting data from its internal memory to an external memory maintained in the claimed interface device.

Furthermore, it is not an obvious variation to incorporate the interface device into the printing apparatus since this goes directly against an object of the present invention. As is described in the specification of the present Application, it is known for a printer to maintain a store of its printer settings in internal memory. A problem arises when the printer develops a fault that causes its internal memory to malfunction. If the interface were an integral part of the printer, then it too would be subject to whatever fault afflicted the printer. Thus, the present invention requires that the backup memory be maintained in the printer's interface device, which is defined as being separate from the printer. This also aids in repair of the printer since the backup data is maintained up-to-date and in close proximity to the printer, but one does not need to open up the printer box to access and repair the printer's internal memory.

Furthermore, Indei's embodiment does not teach or suggest backing up printer setting information (i.e. information integral to the printer's operation) to an interface device. Indeed, the focus of Indei's teachings is his printer control device (i.e. his interface device), and not his printer 5b. Indeed, Indei provides no teachings, or suggestions, for printer repair or printer support. Indei teaches that one should not rely on his printer control device (i.e. on his interface device) to keep important information. Rather, Indei teaches that important information generated within his interface device (i.e. customer records of printer use), be sent up to more reliable locations, such as to a file server, or to a mail server, or to a floppy disk. By contrast the present invention requires that critical information in the printer be copied to its external interface device.

Also, the present invention requires that that the printer takes control over its interface device to direct the transfer of printer settings data to and from the printer to its interface. By contrast, Indei's interface device is a printer control computer 5a in full control of its own operation. Indei does not teach or suggest that the printer 5b may control the transfer of data to and from the printer control device 5a.

The Office Action suggested that this operation might be covered by Indei's Fig. 8. Applicants respectively pointed out that this is not correct since the Office Action identifies Indei's printer controller as the claimed printing apparatus (in order to equate Indei's elements with the presently claimed printer's elements). Consequently, one would be forced to identify Indei's floppy disk drive 56 as the interface device (since it holds the would-be backup memory, i.e. the floppy disk). But this too would not be appropriate since the floppy disk controller is integral to, and not separate from, Indei's printer control device 5a. Nonetheless, the floppy disk drive 56 cannot read on the claimed interface device since the claim language requires that the interface permit communication between the printing apparatus and a host device. Clearly, a floppy disk drive cannot serve this function.

Additionally in reference to Fig. 8, the Office Action states that in this embodiment, Indei shows an interface device that lacks a central processing unit. Applicants respectfully disagree since, as Indei explains, his "interface device" is

actually a printer control device, which he defines as a computer that includes a central processing unit. This is better understood in Indei's Fig. 3, which is defined as being an internal view of Indei's printing control device 5a.

Indei show three embodiments, with two embodiments building on a first. His first embodiment for transferring a backup file to an external file sever 6 is described in detail with reference to his Figs. 2 and 3. His second embodiment, which transfers a backup copy to an external mail server is shown in Figs. 2 and 6. Indei explains that the structure of Fig. 6 is the same as that of Fig. 3 with only newly added elements shown for clarification (col. 4, lines 66-68, and col. 5, lines 1-14, and especially col. 5, lines 16-20). Lastly, his third embodiment, which transfers a backup copy to an external portable memory (i.e. floppy disk) is shown in Fig. 8. Indei explains that the structure of Fig. 8 is the same as that of Fig. 3 with only newly added elements shown for clarification (col. 6, lines 18-22 and col. 3, lines 35-37). Thus, it is clear that Indei is showing only those parts of his computer that communicate the shown floppy drive for implementing this third embodiment. It does not, however, negate that the full description of his computer includes a central processing unit.

Applicants further note that although Indei explains that his device backs up marketing information maintained in his printer control device 5a, the Office action asserts that this is equivalent to backing up the printer's (5b) parameter settings. Applicants respectively disagree since Indei does not teach or suggest any mechanism for providing maintenance services to his printers. Indei shows only a status line 23 for receiving status data (col. 3, lines 11-13), not settings data, and shows no mechanism by which Indei's printer control device 5a may restore (i.e. program/write) parameter settings to the printer.

Although the Office Action notes that the prior art section of the present invention describes the storage of printer settings, the description does not recite the backing up of printer setting to an external interface device.

Furthermore, Applicants again reiterate the nonequivalence of Indei's record keeping data and the presently recited printer setting data. Printer settings data are individual data *bits* (such as used in a boot-up sequence), and

are thus very different from billing record *files* and user profiles record *files*, generated in Indei's printer control device 5a. Stated differently, Indei's data files are not needed for printer operation, and this his printer 5b will continue to function even if the record files in his printer control device 5a are lost. This is because Indei's record files do not pertain to the operation of his printer 5b, itself. By contrast, the claimed printing apparatus cannot function without its settings data. Thus, these two types of information are generated differently by different machines, maintained in separate machines, and serve different purposes. Thus, Applicants contend that there is no teaching or suggestion to equate Indei's record files with the presently claimed printer setting data.

Further in reference to Takaoka (abstract, U.S. Pat. 5,103,318), the Office Action states that Takaoka shows an apparatus with a backup memory capable of saving information when power is turned off and then back on. Applicants respectfully point out that the present claim language does not just recite a nonvolatile memory, which maintains memory contents when power is removed, but rather recites a cause-and-effect, or triggering mechanism. The present invention recites backing up (i.e. copying) information into a backup memory (i.e. second memory) in response to power being turned off.

Claims 6, and 8 are amended to more clearly recite different triggering mechanisms so as to emphasize this cause-and-effect mechanism. This is in direct conflict with Indei, which teaches that his files may be transferred at any scheduled time, but does not teach or suggest any triggering mechanism.

Returning to Takaoka, he does not recites a "backup memory", which by definition is a <u>second</u> memory used to maintain a copy of the contents of a <u>first</u> memory. Furthermore, Takaoka does not teach copying information to the backup memory in response to power being turned off. Rather, Takaoka recites printing a report based on information in his nonvolatile memory in response to power being turned on.

Lastly, the Office Action states that it would be obvious to have the printer provide power to the interface, such as a USB port may provide power to a USB device. Applicants respectfully point out that the interface and the USB device

are different components. That is, if one were to follow the Office Action's construct, then the USB connector would be the interface, and Indei's printer control device 5a would be the USB device. In this reading, the backup memory would have to be in the USB connector (i.e. the interface), and not in Indei's printer control device 5a (i.e. USB device). Furthermore, this construct also requires that Indei's printer controller be the recited host device, and no longer be the interface since it would be connected to the printing apparatus by the USB connector. Thus, this analogy does not appear proper.

Nonetheless, Applicants respectfully point out that the remaining Office Action rejections equate the recited interface device to a computer (i.e. Indei's printer control device 5a), and there is no teaching or suggestion for having a computer powered by a printer.

Lastly, Applicants note that at least claim 42 require that the transfer of printer settings data from the printer's primary data memory unit to the interface device's reserve data memory unit be fully under control of said printer. Indei's printer 5b has no mechanism for altering the internal data store of Indei's printer control device 5a. Furthermore, Indei does not teach or suggest any mechanism by which an external device may manipulate, fully under its control, the internal data store of Indei's printer control device 5a.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration of the present application.

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